

## CLAIMS

1. An electronic card with a permanent memory in which there are stored characteristics for identifying the holder of the card, with a view to the comparison of these characteristics with characteristics entered during an authentication sequence, characterised in that, dynamic characteristics of the signature of the holder being stored in the permanent memory (26), the card has an area (12) for effecting a signature to be authenticated, and processing means (14) for supplying dynamic characteristics of the signature to be authenticated, means of comparing (24) the dynamic characteristics of the signature to be authenticated with the characteristics recorded in the permanent memory (26) in order to produce a validation signal, a temporary memory (20) for the dynamic characteristics of the signature to be authenticated or for the validation signal supplied by the comparison means, and means for allowing the powering of the processing means and/or the comparison means outside a reader intended to read information from the card.

2. A card according to Claim 1, characterised in that it has a receiving antenna for powering the processing means and/or the comparison means in the card.

3. A card according to Claim 1, characterised in that it has an internal energy source for powering the processing means and/or the comparison means.

4. A card according to Claim 3, characterised in that the power source is of the piezoelectric and/or pyroelectric type.

5 5. A card according to Claim 4, characterised in that it has at least one piezoelectric sheet for detecting the dynamic characteristics of the signature to be authenticated, and in that this piezoelectric sheet is also used for producing the electrical energy necessary for the powering of processing means and/or  
10 comparison means.

15 6. A card according to any one of the preceding claims, characterised in that the period of storage in the temporary memory of the dynamic characteristics to be authenticated or of the validation signal is at most about one minute.

20 7. A card according to any one of the preceding claims, characterised in that, said card being of the type with contacts, the signature area (12) for authentication is distinct from the area (28) of the contacts.

25 8. A card according to any one of the preceding claims, characterised in that the signature area (12) has a piezoelectric sheet covered with parallel conductive lines on one face and parallel conductive lines on the other face, the lines on the two faces having different directions, one of the dynamic characteristics consisting of the writing pressure at each point or at selected points.

30 9. A card according to any one of Claims 1 to 7, characterised in that the signature area (12) has two

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superposed piezoelectric sheets, the upper face of the upper sheet (48) having parallel conductive lines and the lower face of the lower sheet (50) also having lines parallel to one another but with a different direction to the conductive lines of the upper sheet, and in that, in each of these sets of parallel lines, the lines of even rank are connected to the first terminal (42; 46) and the lines of odd rank are connected to a second terminal (40; 44).

10            10. A card according to any one of Claims 1 to 7, characterised in that the signature area (12) has two sheets, each of which has parallel conductive lines, these lines, of different directions, coming into contact with one another at the location of a writing stylus.

15            11. A card according to any one of the preceding claims, characterised in that it has means of total or partial inhibiting of at least one function or of one means inside this card, this inhibiting being ordered by the result of the comparison between the dynamic characteristics of the signature to be authenticated and the characteristics recorded in permanent memory.

20            12. A device intended for use with a card according to Claim 2, characterised in that it has a transmitting antenna for powering the receiving antenna of the card, and a support.

25            13. A circuit intended for an electronic card with permanent memory, characterised in that it has a permanent memory for storing dynamic characteristics of the signature of the holder, processing means having

inputs for signals representing a signature and  
supplying dynamic characteristics of a signature to be  
authenticated, means of comparing the dynamic  
characteristics of the signature to be authenticated  
with the characteristics recorded in permanent memory  
in order to produce a validation signal, a temporary  
memory (20) for the dynamic characteristics of the  
signature to be authenticated or for the validation  
signal supplied by the comparison means, and means for  
allowing the powering of the processing means and/or  
the comparison means outside a reader intended to read  
information from the card.